

REMARKS

Claims 1-5, 8-9, 11-21 and 23-26 are pending in the Application and are now presented for examination. Claims 1, 4, 5, 9, 11, 12, 14-21 have been amended. Claims 6, 7, 10 and 22 have been cancelled without prejudice and without disclaimer of subject matter. New Claims 23-26 have been added. Support for newly presented Claim 23 is found at least at ¶¶ [0028], [0037] and [0044]-[0047]. Support for new Claim 24 is found at least at ¶¶ [0026], [0028], [0037] and [0044]-[0047]. Support for new Claim 25 is found at least at ¶¶ [0050]-[0051] and Figure 3. Support for new Claim 26 is found at least at ¶¶ [0026], [0028], [0037] and [0044]-[0047]. No new matter has been added.

Claims 1, 16 and 21 are independent.

CLAIM REJECTIONS UNDER 35 U.S.C. § 102(e)

On page 2 of the Office Action, Claims 1-4, 6, 8, 12-14, 16-18 and 20-22 are rejected under 35 U.S.C. § 102(e) as being anticipated by United States Patent Publication No. 2004/0257436 A1, to Koyanagi et al. (hereinafter “Koyanagi”). Claims 6 and 22 have been cancelled without prejudice and without disclaimer of subject matter, thereby rendering the rejection of these claims moot.

Independent Claim 1:

Applicant has hereby amended independent Claim 1 to recite the features whereby the processor “encodes[s] at least one panoramic image and at least one virtual view from the wide angle image data for display.” Applicant believes these features are not disclosed, suggested or anticipated by Koyanagi. Therefore, Applicant earnestly solicits reconsideration of Claim 1 and withdrawal of the rejection under 35 U.S.C. § 102(e).

The Office Action characterizes Koyanagi as essentially disclosing all the elements as recited in Claim 1. Applicant has amended Claim 1 to more clearly and distinctly recite the features of the claimed invention. Specifically, Applicant has amended Claim 1 to recite a system in which a processor transforms wide angle image data into “panoramic view data corresponding to at least one panoramic view of the monitored area; and virtual view data corresponding to at least one virtual view of a portion of the at least one panoramic view” and encodes “at least one panoramic image and at least one virtual image from the wide angle image data for display.”

Koyanagi does not teach or suggest this feature in which the system transforms wide angle data into both a panoramic view and a virtual view. In other words, the present invention as recited in Claim 1, transforms a single captured image into both a panoramic view and a virtual view without having to recapture additional image data. In contrast, Koyanagi discloses using a pan tilt camera having a zoom lens with a telephotograph side and a wide-angle side. *See* Koyanagi ¶ [0042]. The wide-angle lens is used to generate a panoramic view only upon demand when a user presses a panorama generation button. *See* Koyanagi ¶ [0052]. Data captured from the wide-angle lens is transformed into a stationary panoramic view which is then displayed on a screen. *See* Koyanagi ¶ [0042]-[0043] and [0052]. However, the image displayed in the operation area 6A, i.e. the area that the Office Action mistakenly equates to the virtual view of the present invention, is not generated from the wide-angle data; instead, the image is captured directly from the pan tilt camera by mechanically controlling the pan tilt camera. *See* Koyanagi ¶ [0042]-[0043], and Figure 1. The user operates the pan tilt camera by moving

a cursor over the panoramic or operation area, causing the pan tilter to center the camera on the selected point. *See* Koyanagi ¶ [0044]. Thus, the image displayed in the operation area is not a “virtual view” transformed from wide angle data, but an actual view captured from the pan tilter camera. As Koyanagi does not disclose each and every element of amended Claim 1, Applicant earnestly solicits reconsideration and withdrawal of this rejection.

Independent Claims 16 and 21:

Independent Claim 16 recites a method of generating a graphical user interface, including “transforming portions of the buffered data into virtual view data for at least one virtual view using a virtual view transformation.” The Office Action characterizes Claim 16 as reciting the corresponding method for implementation within the system of Claim 1, and thus rejects Claim 16 on the same basis as Claim 1. As discussed above in relation to Claim 1, Koyanagi does not disclose, teach or suggest a method of *transforming* portions of the wide-angle image into both a panoramic view and a virtual view. The image displayed in the operation area of Koyanagi is not a “virtual view” transformed from wide angle data, but an actual view captured from the pan tilter camera. The only transformations disclosed by Koyanagi pertain to panoramic images. *See* Koyanagi, ¶¶ [0052]-[0083].

Similarly, independent Claim 21 recites “means for processing and transforming said wide-angle image data received from said storing means ... into virtual view data corresponding to at least one virtual view of a portion of the at least one panoramic view.” The Office Action characterizes Koyanagi as disclosing all the elements of Claim 21. As discussed above in relation to Claims 1 and 16, Applicants respectfully disagree with this characterization.

Specifically, Koyanagi does not teach transforming wide angle image data into both panoramic and virtual views. Thus, the above discussion in reference to Claims 1 and 16 applies equally to independent Claim 21. Because Koyanagi does not disclose every feature of amended Claims 16 and 21, Applicant respectfully requests withdrawal of this rejection.

Claim 14:

Applicant has amended Claim 14 to recite the feature in which at least one reference window defines which portion of the panoramic view is displayed in the virtual view and the at least one reference window has “a size and a position determined according to user command data.” Thus, the user determines which portion of the panoramic view is displayed as a virtual view by determining the size of the reference window and positioning the window over the panoramic view.

The Office Action further characterizes Koyanagi as disclosing “at least one reference window overlaid on at least one portion of the at least one panoramic view, each overlaid portion corresponding to the portion of the at least one panoramic view to which the at least one virtual view corresponds.”

Claim 14, as amended, includes the features of amended Claim 1, discussed above, as well as the feature in which the size and position of the reference window is user-determinable to define the virtual view. Support for this feature is found at least at paragraph [0026], where “a user may move and resize reference windows 120 and 150 to cover any portions of the panoramic views 110 and 160. The portions of the panoramic views covered by the reference windows 120 and 150 correspond to or define the virtual views 130 and 140.” Koyanagi does

not disclose, teach or suggest this feature. In contrast, Koyanagi teaches moving a cursor to a point on the panoramic view so that the pan tilter places the “object corresponding to the designated point ... at the center of the operation area.” *See* Koyanagi, ¶ [0044]. In contrast to Claim 14, Koyanagi does not disclose resizing a frame to define the actual contents of the virtual view. Because Koyanagi does not teach, disclose or suggest each and every element of amended Claim 14, Applicant respectfully requests this rejection be withdrawn.

CLAIM REJECTIONS UNDER 35 U.S.C. § 103(a)

On page 5 of the Office Action, Claim 7 is rejected under 35 U.S.C. §103(a) as being unpatentable over Koyanagi. Applicant has cancelled Claim 7, without prejudice and without disclaimer of subject matter, thereby rendering the rejection of this claim moot.

On page 6 of the Office Action, Claims 9-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Koyanagi in view of United States Patent Publication No. 2004/0047623 A1, to Top et al. (hereinafter “Top”). Claim 10 has been cancelled without prejudice or disclaimer, rendering this rejection moot.

On page 7 of the Office Action, Claims 5 and 15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Koyanagi in view of United States Patent No. 5,563,650 A, issued to Poelstra (hereinafter “Poelstra”).

On page 9 of the Office Action, Claim 19 is rejected under 35 U.S.C. §103(a) as being unpatentable over Koyanagi in view of Poelstra as applied to claims 5 and 15 above, and further in view of Top.

Claims 9 and 19:

Applicant has herein amended dependent Claim 9 to more clearly recite the feature in which the system includes a second video camera system, “wherein captured video image data *from the second video camera* is displayed in the at least one virtual view.”

The Office Action characterizes Koyanagi as disclosing a majority of the features of Claim 9, as discussed in relation to Claim 1, with the exception that the camera system is a dome system. The Office Action relies upon Top to disclose the dome camera, and more specifically, “a rugged miniature pan/tilt dome camera assembly for use in security systems.” Applicant has herein replaced the dome feature in Claim 9 with “a second video camera,” which removes the limitation of a dome camera. Tom discloses only the use of a single dome camera, not two camera systems.

Claim 9 claims the arrangement described beginning at least in paragraph [0040] wherein the data presented in the virtual view is not derived from image data transformed from the wide-angle data, but captured by a second, separate and distinct source other than the video camera system providing wide-angle image data used to generate the panoramic views. “In an alternative embodiment, instead of transforming wide angle image data in the image buffer 220 into a virtual view using a virtual view transformation algorithm, the image data processor 225 may generate virtual view data from video image data produced by one or more additional camera systems 250.” See ¶ [0040]. In contrast, in Koyanagi, all views are derived from a single pan tilter camera. Claim 9 has been amended to depend from Claim 4, in which the first camera system clearly provides the wide-angle data, and has been further amended to clearly recite that

the virtual view data originates from a second video camera system. Thus, as the features of amended Claim 9 are not taught, disclosed or suggested by Koyanagi or Top, alone or in combination, Applicant earnestly solicits reconsideration and withdrawal of this rejection.

Similarly, Claim 19 has been amended to clearly recite the feature in which “buffered wide-angle data is received from a *first* video camera system” and further includes “receiving virtual view data for the at least one virtual view from the *second* camera system.” As discussed above in relation to Claim 9, this feature is not disclosed, taught or suggested in Koyanagi or Top, whether considered alone or in combination. Thus, Applicant earnestly solicits reconsideration and withdrawal of this rejection.

Claim 11:

Dependent Claim 11 recites the feature in which the “system transforms wide-angle image data received by the buffer into virtual view data corresponding to at least one virtual view and into panoramic view data corresponding to at least one panoramic view *in real time*” (emphasis added). This feature is not taught, suggested or disclosed by Koyanagi or Top, either alone or in combination.

The Office Action characterizes Koyanagi as teaching that “the system transforms wide-angle image data received by the buffer into virtual view data corresponding to at least one virtual view and into panoramic view data corresponding to at least one panoramic view in real time.” Applicant respectfully disagrees with this characterization. As Claim 9 depends, indirectly, from Claim 1, the arguments discussed above relating to the creation of virtual views apply equally to Claim 9. Additionally, Koyanagi does not disclose the creation of panoramic

views *in real time*. In contrast, Koyanagi discloses the creation of a panoramic picture only when a user presses the panoramic generation button. *See Koyanagi ¶ [0052]*. Thus, the panoramic picture is not created and displayed in real time, but only upon demand. Since the features recited in Claim 11 are not disclosed, taught or suggested in Koyanagi or Top, whether considered alone or in combination, Applicant earnestly solicits reconsideration and withdrawal of this rejection.

Claim 15:

Applicant has amended Claim 15 to include all the elements of Claim 14, as discussed above, as well as the feature in which “the first panoramic view and the second panoramic view combine to provide a 360° view of the monitored area relative to a vertical axis.”

The Office Action rejected Claim 15 as unpatentable over Koyanagi in view of Poelstra. The Office Action characterizes Koyanagi as teaching the majority of the features of Claim 15, with the exception of “a second panoramic view, the second panoramic view corresponding to *the remaining portion of the monitored area*, and a second virtual view, the second virtual view corresponding to a second portion of the second panoramic view.” The Office Action relies upon Polestra to teach this feature as “more than one panoramic image may be extracted from the initial fish eye image.” Applicant respectfully disagrees with the Office Action’s assessment of Polestra. While multiple images *may* be extracted from the fish eye image, Polestra does not teach or suggest that the *remaining portion of the monitored area* is displayed in the second panoramic view. Polestra does not teach or suggest that the full 360° viewing area is displayed, nor does Polestra teach or suggest an angle of reference for the viewing area, as discussed above

with respect to Claim 1. Because neither Koyanagi nor Polestra, alone or in combination, teach, disclose or suggest every element of amended Claim 15, Applicant respectfully requests this rejection be withdrawn.

Claims 2-5, 8-9, 11-15, 17-20 and 23-26 are each dependent either directly or indirectly from one or another of independent Claims 1, 16 and 21 discussed above. These claims recite additional limitations which, in conformity with the features of their corresponding independent claim, are not disclosed or suggested by the art of record. The dependent claims are therefore believed patentable. However, the individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

For all of the above reasons, the claim objections are believed to have been overcome placing Claims 1-5, 8-9, 11-21 and 23-26 in condition for allowance, and reconsideration and allowance thereof is respectfully requested.

The Examiner is encouraged to telephone the undersigned to discuss any matter that would expedite allowance of the present application.

Of note, Applicant originally paid for examination of 22 claims, three of which could be independent. The Application, as amended, contains 22 claims, three of which are independent. Applicants believe that no fee for examination of additional claims is currently due. The Commissioner is hereby authorized to credit overpayments or charge payment of any additional fees associated with this communication, including a one-month extension of time, to Deposit Account No. 502104.

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